

Ruby - Feature #2013

[PATCH] a = *b calls b.*@

08/30/2009 02:53 PM - jeremye (Jeremy Evans)

Status:	Rejected
Priority:	Normal
Assignee:	matz (Yukihiro Matsumoto)
Target version:	3.0

Description

=begin

This makes the * operator operate more similarly to the + and - operators. The binary versions of + and - call methods named + and -, while the unary versions call methods named +@ and -@. The binary * operator calls the method named *, but the unary * operator calls the method to_a currently, and used to call to_ary in 1.8.6 (and at some point may have called to_splat).

I think this makes for more consistent behavior, and hopefully it isn't just a foolish consistency. I brought up this idea as a question in Shugo Maeda's presentation at RubyKaigi 2009, and discussed it with Matz at Lone Star Ruby Conf 2009, and he thought the idea had merit.

Here's a basic example how this would look:

```
class MultiplePersonality
  def *@
    [self, [self, self]]
  end
end
```

```
mp = MultiplePersonality.new
p1, mp2 = *mp
```

This comes with a patch that appears to work from my simple testing, but this is my first time working with the internal ruby code, so I apologize in advance if it doesn't do things correctly.

The patch modifies parse.y so the above is no longer a syntax error. It adds a USTAR token to the parser to represent that *@ token. It modifies the splatting to call *@ instead of to_a. Also, for backwards compatibility, it adds *@ to BasicObject, and has it call to_a if it responds to to_a. This allows code that defines to_a and expects that the unary * operator will call to_a to still work.

This patch is mostly for consistency, but it also allows the programmer to make to_a return one thing, and the unary * operator return something else. I can think of the following use case:

Represents an abstract set of rows in the database

```
class Dataset
  def to_a
    retrieve_database_rows
  end
  def *@
    [self]
  end
end
dataset = Dataset.new
```

Explicitly asking for an array means I want

an array of database rows represented by the

dataset.

```
rows = dataset.to_a
```

If the dataset had any rows, I want to debug print each row separately. However, if it did not have any rows, I want to debug print the dataset itself.

```
p(*(rows.empty? ? dataset : rows))
```

I'd like to thank Eleanor McHugh for helping me find the key part of ruby that needed to be modified to support this (in `vm_inshelper.c`).

```
=end
```

History

#1 - 09/19/2009 06:08 AM - marcandre (Marc-Andre Lafortune)

- Category set to core

- Assignee set to matz (Yukihiro Matsumoto)

```
=begin
```

```
=end
```

#2 - 03/22/2010 11:00 AM - mame (Yusuke Endoh)

- Target version set to 3.0

```
=begin
```

Hi,

This makes the `*` operator operate more similarly to the `+` and `-` operators.

Interesting. It may be useful to simplify the semantics of multiple assignment which is considered as one of most complex part of Ruby.

But it is very primitive part of Ruby semantics.

I think that such a spec change must not be included in 1.9.x.

So I set the target of this ticket to 2.0.

--

Yusuke Endoh mame@tsg.ne.jp

```
=end
```

#3 - 03/24/2010 10:16 PM - yugui (Yuki Sonoda)

```
=begin
```

On Sun, Aug 30, 2009 at 2:53 PM, Jeremy Evans redmine@ruby-lang.org wrote:

I think this makes for more consistent behavior, and hopefully it isn't just a foolish consistency. I brought up this idea as a question in Shugo Maeda's presentation at RubyKaigi 2009, and discussed it with Matz at Lone Star Ruby Conf 2009, and he thought the idea had merit.

+1

Interesting. But it is so large change for the language feature to add to 1.9.2. I do not include this feature in 1.9.2.

But I also think it can be added to 1.9.x. What do you think, matz?

Do you want add it to ruby 1.9.x?

-- Yuki Sonoda (Yugui)

```
=end
```

#4 - 09/14/2010 04:19 PM - shyouhei (Shyouhei Urabe)

- Status changed from Open to Assigned

```
=begin
```

=end

#5 - 10/18/2011 09:16 AM - naruse (Yui NARUSE)

- *Project changed from Ruby to 14*
- *Category deleted (core)*
- *Target version deleted (3.0)*

#6 - 10/23/2011 05:21 PM - naruse (Yui NARUSE)

- *Project changed from 14 to Ruby*

#7 - 11/20/2012 08:51 PM - mame (Yusuke Endoh)

- *Description updated*
- *Target version set to 3.0*

#8 - 10/22/2017 12:29 AM - mame (Yusuke Endoh)

- *Status changed from Assigned to Rejected*

I'm closing this ticket since the discussion has been stalled completely.

I still think this is an interesting proposal. If you (or anyone else) are interested in this feature, please create a new ticket. It would be good to reimplement it for trunk, and to investigate its merit on real-world applications and the compatibility problem.

Files

unary_star_op_svn.diff	3.99 KB	08/30/2009	jeremye (Jeremy Evans)
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